



Curriculum Plan Physics Year 9
2016

Autumn Term	Spring Term	Summer Term
<p><u>Energy</u> 4.2.1.1 The changes involved in the way energy is stored when a system changes. 4.2.1.2 The amount of energy stored by an object can be calculated. 4.2.1.3 The way energy is stored in a system can change. This change can be calculated.</p> <p><u>Power</u> 4.1.1.4 Work done and energy transferred 4.2.1.5 The power rating of an appliance states how much energy is being transferred or the rate at which work is done.</p> <p><u>Conservation and dissipation of energy</u> 4.2.2.1 The total amount of energy in a system remains constant though the way the energy is stored in the system can change. 4.2.2.2 Calculating efficiency.</p>	<p>Required practical activity 3: Use circuit diagrams to set up and check appropriate circuits to investigate the factors affecting the resistance of electrical circuits.</p> <p>4.4.3.1 Alternating and direct current. 4.4.3.2 The name, colour and function of each wire in a three core electrical cable. Electric shocks 4.4.3.3 Earthing, fuses and circuit breakers as safety measures with electrical circuits. 4.4.4.1 Electrical power and how it is calculated.</p>	<p><u>Atomic structure and radioactivity</u></p> <p>4.7.1.1 The size and structure of an atom. 4.7.1.2 How to represent atoms. 4.7.1.3 Scientific models of the atom and how these models have changed. 4.7.2.1 The radioactive decay of an unstable element and radiation. Alpha, bet and gamma. 4.7.2.2 Nuclear decay equations for alpha and beta decay. 4.7.2.3 The randomness of radioactive decay. 4.7.2.4 How to handle radioactive sources safely to avoid contamination. 4.7.2.4 The process and uses of irradiation. 4.7.2.4 Safety precautions taken when dealing with radioactive sources. 4.7.3.2 The activity of a radioactive source affects its half-life. 4.7.3.2 The hazards of radioactive sources</p>
<p>HALF TERM</p>		

Bishop Milner Catholic College



<p><u>National and global energy resources</u></p> <p>4.2.3 Renewable and non-renewable energy resources.</p> <p><u>Electricity</u></p> <p>4.4.1.1 How to draw circuit symbols.</p> <p>4.4.1.2 Making an electric current flow.</p> <p>4.4.1.3 How the resistance of a component affects the current flowing through it.</p> <p>Required practical activity 4: use circuit diagrams to construct appropriate circuits to investigate the I-V characteristics of a variety of circuit elements, including a filament lamp, a diode and a resistor at constant temperature.</p> <p>4.4.1.4 Ohm's law and the conditions needed for it to apply.</p> <p>4.4.2 Resistors in circuits</p>	<p><u>Matter</u></p> <p>4.6.1.1 How to determine the density of a material.</p> <p>4.6.1.1 The particle model of matter.</p> <p>4.6.1.2 Changing the state of materials.</p> <p>4.6.2.1 Internal energy of materials.</p> <p>4.6.2.2 Specific heat capacity.</p> <p>Required practical activity 1: investigation to determine the specific heat capacity of one or more materials.</p> <p>4.6.2.3 Specific latent heat.</p> <p>4.6.3.1 Using the particle model of matter explain motion of particles in a gas.</p>	
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